THE MINISTER OF STATE IN THE MINISTRY OF RURAL DEVELOPMENT (SHRI RAMESHWAR THAKUR): (a) to (c) Article 243 G of the Constitution contains provisions regarding functions which should be entrusted with Panchayati raj institutions. Subjects have been specifically mentioned in the Eleventh Schedule to the Constitution. Provisions on this basis have been included in the legislation on Panchayati raj of all the State. This Ministry has requested other Ministries/Departments to review their programmes in view of Art. 243 O and the Eleventh Schedule to the Constitution. However, all these being state specific matters, have to be decided by the states. In view of the fact that the Constitution requires Panchayati raj institutions to perform functions relating to the subjects in the Eleventh Schedule and also in View of the states' legislation on Panchayati raj, it will be the states, responsibility to devolve adequate powers, authority and functions on Panchayati Raj Institutions to enable them to discharge their statutory responsibilities and functions. Some states like Maharashtra, Gujarat, West Bengal etc. have already devolved functions and powers upon the Panchayati Raj Institutions.

Biotechnology-Based Industries-Projects

4217. SHRI G.Y. KRISHNAN: Will the PRIME MINISTER be pleased to state:

(a) which are the Biotechnology-based industries currently in production in India;

(b) the details of items of manufacture and source of technology/foreign collaborator; and

(c) the details of industries/projects licensed and currently not in production?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND THE MINISTER OF STATE IN DEPTTS. OF ATOMIC ENERGY. SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) to (c) Bio-technology based industries are those where biological agents are used to produce goods and services, which extensively use the principles of microbiology, biochemistry, molecullar biology and immunology. The estimated number of industries is about 500. The industries currently in production in India are in the following areas:—

I. Drugs and Pharmaceuticals

(1) Immunodiagnostics

(2) Vaccines

(3) Antibiotics by fermentation

(4) Recombinant Products

(5) Blood products

II. Industrial Products

(1) Alcohol, organic acids, sweetening agents like glucose.

(2) Industrial enzymes like papain, pectinase, diastase, protease, etc.

III. Agriculture

(1) Plant tissue culture based products

(2) Hybrid high yielding seeds

(3) Biofertilizers

(4) Biopesticides

(5) Other products including plant growth hormones.

IV. Other Biotech-products

(1) Restriction Endonuclcases

(2) Gels, Polymers, special plastics etc.

(3) Peptides, nucleotides, etc.

Foreign collaboration is generally sought for manufacturing of items such as vaccines, diagnostics, recombinant products, plant tissue culture etc. The names of about 423 industries covering the above areas which have been given license are available. About 20% have problems of inadequate finances, technology and related aspects; but 80% of

these have taken up production of various items.

Russian scientists and Technicians to join R&D organisations

4218. SHRI K.R. MALKANI: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that due to the general crisis in Russia, lots of top-grade scientists and technicians are out of job or getting just about $50 a month (vide the International Herald Tribune, Hong Kong edition, 26th July); and

(b) whether Government would consider inviting such top scientists and technicians to join our research and development organisations?

THE MINISTER OF STATE IN PRIME MINISTERS OFFICE AND MINISTER OF STATE IN DEPARTMENTS OF ATOMIC ENERGY, SPACE AND IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) and (b) Government does not have information on this matter. Russian specialists are associated as short/long term consultants with our Science and Technology (S&T) collaborative programmes with Russia.

Study of Jupiter Collisions

*219. DR. SHRIKANT RAMCHANDRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) the details of the studies made by Indian Scientists and Astronomers about the recent event of the Comet striking Planet Jupiter;

(b) who made these studies and whether these studies were sponsored by Government;

(c) whether any Indian Scientist or Astronomer has predicted any Comet striking the Earth in the near future;

(d) if so, the details thereof;

(e) whether Indian authorities art planning any tie-up with the NASA of USA for such studies, and

(f) if so, the details thereof?

THE MINISTER OF STATE IN PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) Several scientific organisations in India had planned and carried out observations of the Comet Shoemaker Levy-9 colliding with the Planet Jupiter as detailed below:

(i) *Optical Observations:*

Indian Institute of Astrophysics (IIA) Bangalore obtained 200 High Quality Images of this collision through 6 filters in various wave length ranges from their observatory at Kavalur. These astronomical events were powerful and caused visible effects on the Jovian atmosphere such as change in the intensity of methane bands and emission of intense radiation from heated clouds of gas which mushroomed above the atmosphere. The event also left prominent changes on the visible appearance of the atmosphere of the planet.

Series of fast images were obtained at Japal Rangapur Observatory, Hyderabad with the help of Sophisticated CCD Camera. The photographs obtained show the dark regions of crash sites of Jupiter.

Optical observations were also carried out at Jaisalmer (Rajasthan) by the Physical Research Laboratory, Ahmedabad. About 200 frames were recorded. Detailed image processing is under progress.

ii. *Radio Observations:*

Scientists at Raman Research Institute, Bangalore detected several